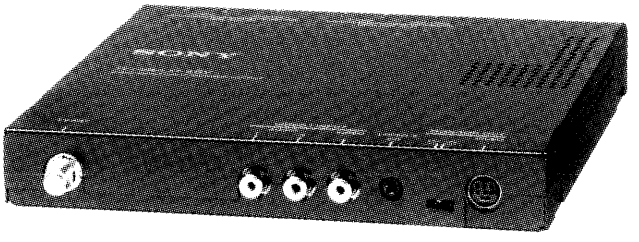
XT-40V

SERVICE MANUAL

US Model
Canadian Model



XT-40V is based on model XT-U400V.
As only difference parts of XT-U400V in this service manual.
Refer to XT-U400V service manual previously issued for the other information.

1. DIFFERENCE PARTS LIST

XT-U400V				XT-40V	
Page	Ref. No.	Part No.	Discription	Part No.	Discription
25	1	*3-384-252-01	CHASSIS (UP-US)	*3-384-252-11	CHASSIS (UP-US)
	2	*A-3295-498-A	MOUNTED PCB (B), MAIN	*A-3298-045-A	MOUNTED PCB (B), MAIN
28	IC601	8-759-178-51	IC M37201M6-514FP	8-759-255-55	IC M37201M6-517FP
29	L801	1-421-369-00	COIL, CHOKE	1-403-591-11	COIL, CHOKE
32		*3-904-507-01	INDIVIDUAL CARTON	*3-909-892-01	INDIVIDUAL CARTON
		3-755-919-21	MANUAL, INSTRUCTION	3-757-968-21	MANUAL, INSTRUCTION (ENGLISH, FRENCH)

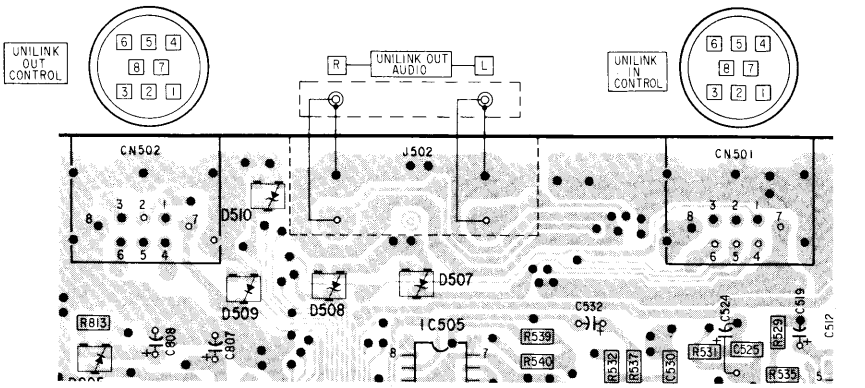
TV TUNER UNIT

SONY®

2. PRINTED WIRING BOARD

【MAIN BOARD】 (CONDUCTOR SIDE)

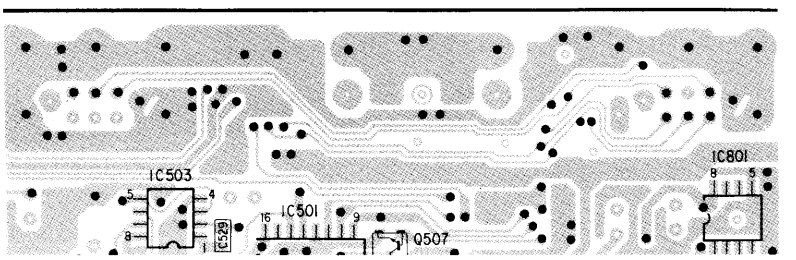
• Page 17 to 18
Location : A16 to B19



1-645-937-12

【MAIN BOARD】 (COMPONENT SIDE)

• Page 16
Location : B4 to B7

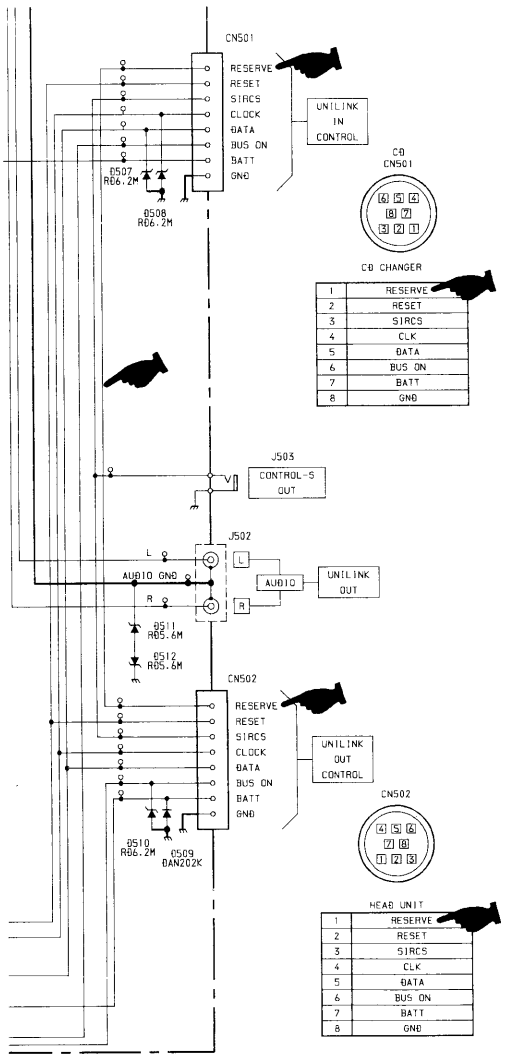


1-645-937-12

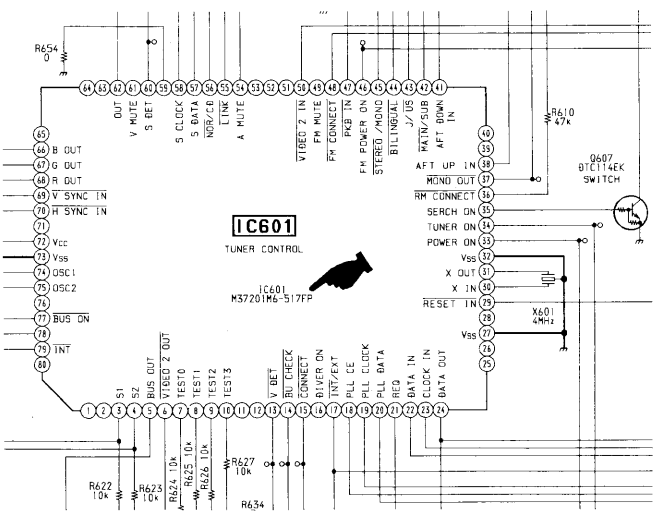
3. SCHEMATIC DIAGRAM

【MAIN BOARD】

• Page 22
Location : H41 to O45



• Page 23
Location : J32 to M36



9-959-211-11

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Mobile Electronics Group

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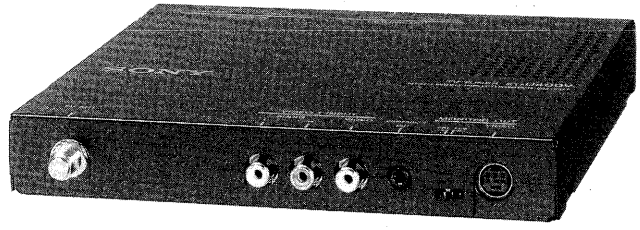
XT-U400V

SERVICE MANUAL

US Model
Canadian Model



SPECIFICATIONS

Television system	NTSC
Channel coverage	2 ch – 13 ch (VHF)
	14 ch – 69 ch (UHF)
Current drain	1 A
Power requirements	
	DC 12 V car battery
	(negative ground)
Dimensions	185 × 27 × 175 mm (w/h/d)
	($7^3/_8 \times 1^1/_8 \times 7$ in.)
Mass	Approx. 850 g (1 lb. 14 oz)
Supplied accessories	
	Power connecting lead (1)
	UNILINK cable (1)
	RCA PIN cord (1)
	Velcro tape (1)

Design and specifications subject to change without notice.

TV TUNER UNIT

SONY®

TABLE OF CONTENTS

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SERVICING NOTE

- The voltage measurement and electrical adjustment must be performed with the master unit XR-U550 connected, since the XT-U400V does not operate by itself.

SECTION 1
GENERAL

This section is extracted from instruction manual.

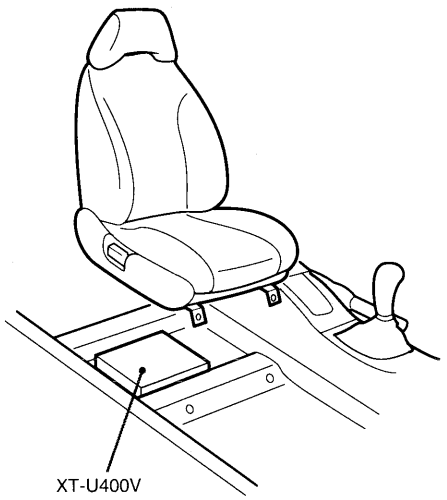
Installation

Before Installation

- Avoid installing the unit where it would be subjected to:
  — high temperature, such as from direct sunlight or hot air from the heater.
  — rain or moisture.
  — dust or dirt.
  — magnetic fields.
- Use only the supplied mounting hardware for a safe and secure installation.

If you have any questions or problems concerning your unit that are not covered in this manual, consult your nearest Sony dealer.

Use the supplied Velcro tape for mounting.



XT-U400V

Features

The XT-U400V is a TV tuner unit which is compatible with the Sony UNILINK system.

Precautions

- The installation of this unit may vary according to the type and make of the car.
- If you find it difficult to install this unit yourself, consult the dealer.
- The unit is designed for negative ground 12 V DC operation only.
- Choose the mounting location carefully so that the unit will not interfere with the normal driving conditions of the driver.

Notes

- The manufacturers cannot accept any responsibility for this product malfunctioning due to tampering or incorrect connections.
- The superimposed characters on your TV monitor can be distorted in an area where ghost images can be seen on the TV monitor.

Notes on the TV monitor connection

- **Do not install the TV monitor in a place where the driver can see the monitor.**
- Set the monitor select switch (located next to the monitor output jack) to either the CRT or LCD position according to the type of the monitor to be connected. Improper setting of this switch may result in the unit not producing optimum picture.
- If you wish to connect the unit to your existing TV monitor (equipped with a video input jack), use the optional TV monitor output adaptor cord (RC-54 or RC-70). For the details, refer to the TV monitor's instruction manual.

Connections Connexions

Caution

- Before making connections, disconnect the ground terminal of the car battery to avoid short circuiting.
- Connect the yellow power connecting lead only after all the other leads are connected.
- Be sure to connect the ground lead of the unit securely to a metal point of the car. A loose connection may cause a malfunction of the unit.

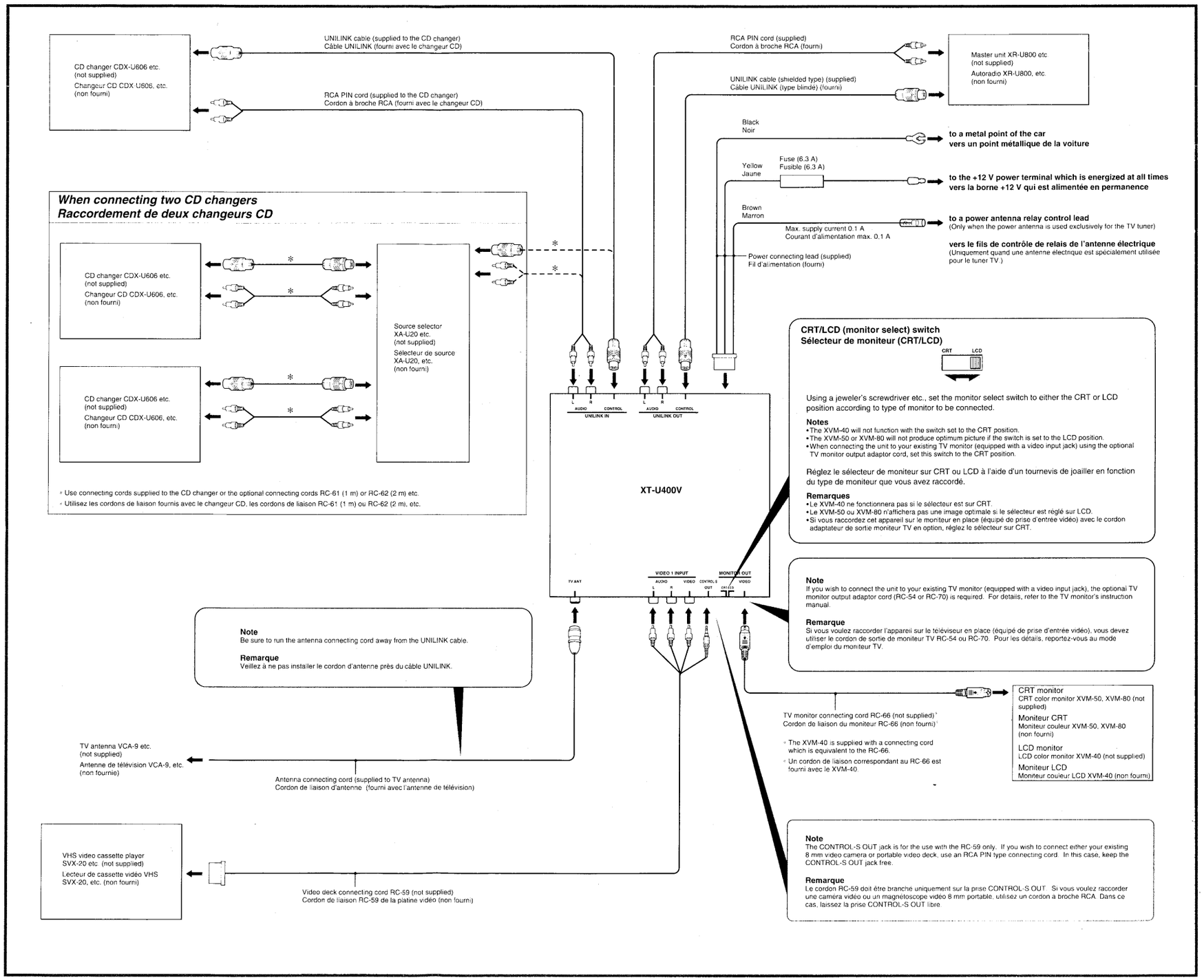
Note
If your car has an on-board computer or navigation computer installed, its memories can be wiped out when the negative terminal of the car battery is disconnected. In such a case, make sure that all the connections except the yellow power connecting lead are completed before connecting the power connecting lead.

Attention

- Avant d'effectuer les connexions, débranchez la borne de masse de la batterie de voiture pour éviter un court-circuit.
- Branchez le fil d'alimentation jaune après avoir terminé toutes les autres connexions.
- Raccordez fermement le fil de masse de l'appareil à un point métallique de la voiture. Un mauvais branchement peut entraîner des défaillances de l'appareil.

Remarque
Si un ordinateur de bord ou de navigation est installé dans votre voiture, sa mémoire risque d'être effacée si la borne négative de la batterie est débranchée.
Dans ce cas, effectuez toutes les connexions avant de raccorder le fil jaune d'alimentation.

Connection Diagram/Schéma de connexions


CD changer CDX-U606 etc. (not supplied)
Changeur CD CDX-U606, etc. (non fourni)
UNILINK cable (supplied to the CD changer)
Câble UNILINK (fourni avec le changeur CD)
RCA PIN cord (supplied to the CD changer)
Cordon à broche RCA (fourni avec le changeur CD)
RCA PIN cord (supplied)
Cordon à broche RCA (fourni)
UNILINK cable (shielded type) (supplied)
Câble UNILINK (type blindé) (fourni)
Master unit XR-U800 etc. (not supplied)
Autoradio XR-U800, etc. (non fourni)
Black
Noir
to a metal point of the car
vers un point métallique de la voiture
Yellow
Jaune
Fuse (6.3 A)
Fusible (6.3 A)
to the +12 V power terminal which is energized at all times
vers la borne +12 V qui est alimentée en permanence
Brown
Marron
Max. supply current 0.1 A
Courant d'alimentation max. 0.1 A
to a power antenna relay control lead
(Only when the power antenna is used exclusively for the TV tuner)
vers le fils de contrôle de relais de l'antenne électrique
(Uniquement quand une antenne électrique est spécialement utilisée pour le tuner TV.)
Power connecting lead (supplied)
Fil d'alimentation (fourni)
When connecting two CD changers
Raccordement de deux changeurs CD
CD changer CDX-U606 etc. (not supplied)
Changeur CD CDX-U606, etc. (non fourni)
CD changer CDX-U606 etc. (not supplied)
Changeur CD CDX-U606, etc. (non fourni)
Source selector XA-U20 etc. (not supplied)
Sélecteur de source XA-U20, etc. (non fourni)
* Use connecting cords supplied to the CD changer or the optional connecting cords RC-61 (1 m) or RC-62 (2 m) etc.
* Utilisez les cordons de liaison fournis avec le changeur CD, les cordons de liaison RC-61 (1 m) ou RC-62 (2 m), etc.
XT-U400V
AUDIO CONTROL UNILINK IN
AUDIO CONTROL UNILINK OUT
TV ANT
VIDEO 1 INPUT
MONITOR OUT
CRT/LCD
CRT/LCD (monitor select) switch
Sélecteur de moniteur (CRT/LCD)
CRT LCD
Using a jeweler's screwdriver etc., set the monitor select switch to either the CRT or LCD position according to type of monitor to be connected.
Notes
• The XVM-40 will not function with the switch set to the CRT position.
• The XVM-50 or XVM-80 will not produce optimum picture if the switch is set to the LCD position.
• When connecting the unit to your existing TV monitor (equipped with a video input jack) using the optional TV monitor output adaptor cord, set this switch to the CRT position.
Réglez le sélecteur de moniteur sur CRT ou LCD à l'aide d'un tournevis de joailler en fonction du type de moniteur que vous avez raccordé.
Remarques
• Le XVM-40 ne fonctionnera pas si le sélecteur est sur CRT.
• Le XVM-50 ou XVM-80 n'affichera pas une image optimale si le sélecteur est réglé sur LCD.
• Si vous raccordez cet appareil sur le moniteur en place (équipé de prise d'entrée vidéo) avec le cordon adaptateur de sortie moniteur TV en option, réglez le sélecteur sur CRT.
Note
If you wish to connect the unit to your existing TV monitor (equipped with a video input jack), the optional TV monitor output adaptor cord (RC-54 or RC-70) is required. For details, refer to the TV monitor's instruction manual.
Remarque
Si vous voulez raccorder l'appareil sur le téléviseur en place (équipé de prise d'entrée vidéo), vous devez utiliser le cordon de sortie de moniteur TV RC-54 ou RC-70. Pour les détails, reportez-vous au mode d'emploi du moniteur TV.
Note
Be sure to run the antenna connecting cord away from the UNILINK cable.
Remarque
Veillez à ne pas installer le cordon d'antenne près du câble UNILINK.
TV antenna VCA-9 etc. (not supplied)
Antenne de télévision VCA-9, etc. (non fournie)
Antenna connecting cord (supplied to TV antenna)
Cordon de liaison d'antenne (fourni avec l'antenne de télévision)
TV monitor connecting cord RC-66 (not supplied)*
Cordon de liaison du moniteur RC-66 (non fourni)*
* The XVM-40 is supplied with a connecting cord which is equivalent to the RC-66.
* Un cordon de liaison correspondant au RC-66 est fourni avec le XVM-40.
CRT monitor
CRT color monitor XVM-50, XVM-80 (not supplied)
Moniteur CRT
Moniteur couleur XVM-50, XVM-80 (non fourni)
LCD monitor
LCD color monitor XVM-40 (not supplied)
Moniteur LCD
Moniteur couleur LCD XVM-40 (non fourni)
VHS video cassette player SVX-20 etc. (not supplied)
Lecteur de cassette vidéo VHS SVX-20, etc. (non fourni)
Video deck connecting cord RC-59 (not supplied)
Cordon de liaison RC-59 de la platine vidéo (non fourni)
Note
The CONTROL-S OUT jack is for the use with the RC-59 only. If you wish to connect either your existing 8 mm video camera or portable video deck, use an RCA PIN type connecting cord. In this case, keep the CONTROL-S OUT jack free.
Remarque
Le cordon RC-59 doit être branché uniquement sur la prise CONTROL-S OUT. Si vous voulez raccorder une caméra vidéo ou un magnétoscope vidéo 8 mm portable, utilisez un cordon à broche RCA. Dans ce cas, laissez la prise CONTROL-S OUT libre.

SECTION 2
ELECTRICAL ADJUSTMENTS

Electrical adjustment uses the following measuring equipment.

Equipment used

1) Monitor TV
2) Spectrum analyzer
3) Oscilloscope
4) NTSC pattern generator
5) Audio oscillator (FM RF SSG)
6) Master unit (XR-U550, etc.)

Connection of equipment

Connect measuring equipment as shown below, unless otherwise specified, then perform adjustment.

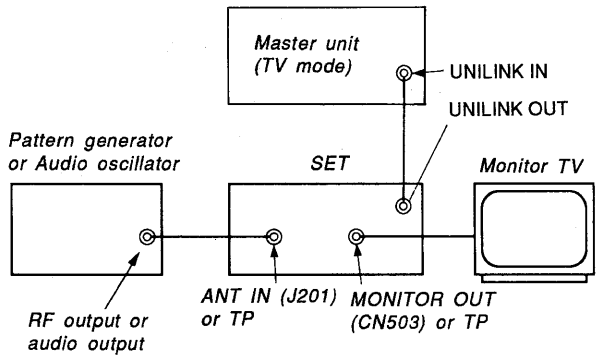


Fig. 1

Setup for adjustment

Electrical adjustment uses video signal output form NTSC pattern generator, and therefore confirm that this video signal satisfies the specification.

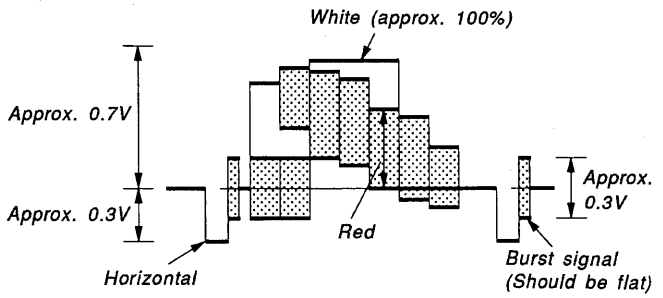


Fig. 2 Color Bar Signal by Pattern Generator

Adjustment Location : See page 8

VCO Coil Adjustment

1) Connect TP5 (IC201 pin ⑤) to GND with no signal input to antenna.
2) Connect a spectrum analyzer to TP7.
3) Adjust T203 so that the center of pulse is on 45.75MHz.

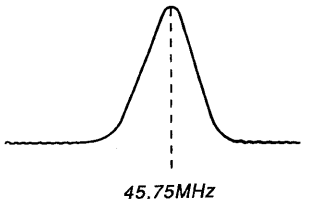


Fig. 3

Simple Adjustment (VCO coil adjustment)

1) Connect TP5 (IC201 pin ⑤) to GND with no signal input to antenna, and measure voltage at TP6 (IC201 pin ⑩).
2) Disconnect TP5 (IC201 pin ⑤) from GND, and from J201 receive color bar signal 80dB through RF (CH8).
3) Adjust T203 so that the voltage at TP6 (IC201 pin ⑩) at this time is equal to voltage of 1) in the unit of 10mV.

f's Trap Coil Adjustment

1) From TP2 (TU201 pin ①), input 47.25MHz, 50dB using the FM RF SSG via capacitor 0.01 μF (1-161-379-00, etc.).
2) Connect a spectrum analyzer to TP3 (Q201 collector), and adjust T201 so that the peak of 47.25MHz pulse becomes minimum.

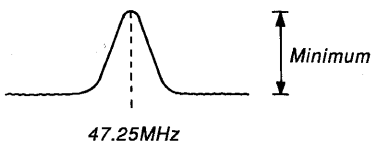
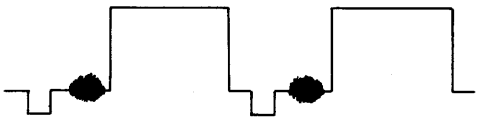


Fig. 4

Simple Adjustment (f's coil adjustment)

1) From J201, receive a fixed pattern of color bar signal (e.g. white 100% signal) through RF (CH8).
2) Connect an osilloscope to TP13 (CN503 pin ②).
3) Adjust T201 so that the output pulse does not destort or its level does not drop.

Correct



Video pulse must not distort as shown in Fig. 6.

Fig. 5

Incorrect

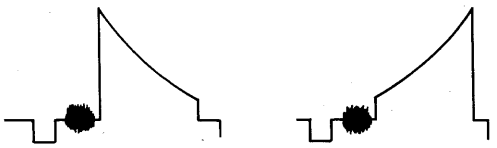


Fig. 6

RF AGC Voltage Adjustment

1) From J201, receive color bar signal 63dB through RF (CH8).
2) Adjust RV201 so that the voltage at TP1 (TU201 pin ⑤) is 5V±0.1V.

AFT Coil Adjustment

1) From J201, receive color bar signal 80dB through RF (CH8).
2) Connect an oscilloscope to TP4 (AFT OUT).
3) Adjust T202 so that the peak of output pulse is 2.5V.

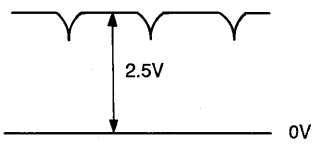


Fig. 7

FM DET Coil Adjustment

1) From J201, receive color bar signal 80dB, monaural 1kHz 100% modulation through RF (CH8).
2) Connect an oscilloscope to TP8 (FM DET OUT).
3) Adjust T204 so that the output pulse becomes maximum.

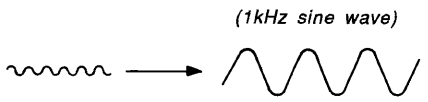
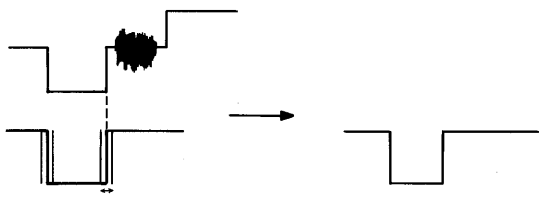


Fig. 8

SSG Clock Adjustment

1) From J201, receive color bar signal 80dB through RF (CH8).
2) Connect an oscilloscope to TP16 (IC404 pin ㉙).
3) Take the trigger with horizontal sync signal at TP13 (CN503 pin ②).
4) Adjust CT401 so that the fluctuation of output pulse becomes stationary.



Edge fluctuation stops

Fig. 9

Burst Level Adjustment

1) Using the master unit, select the VIDEO mode and display a blue background on monitor TV without VIDEO signal input.
2) Connect an oscilloscope to TP13 (CN503 pin ②).
3) Adjust RV401 so that the lower level of burst signal is 1/2 of horizontal sync signal level.

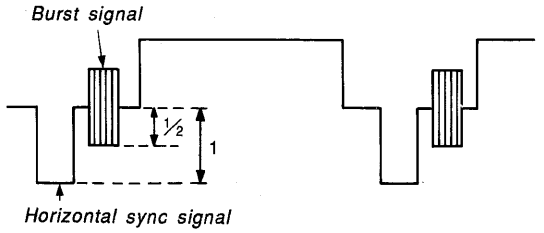
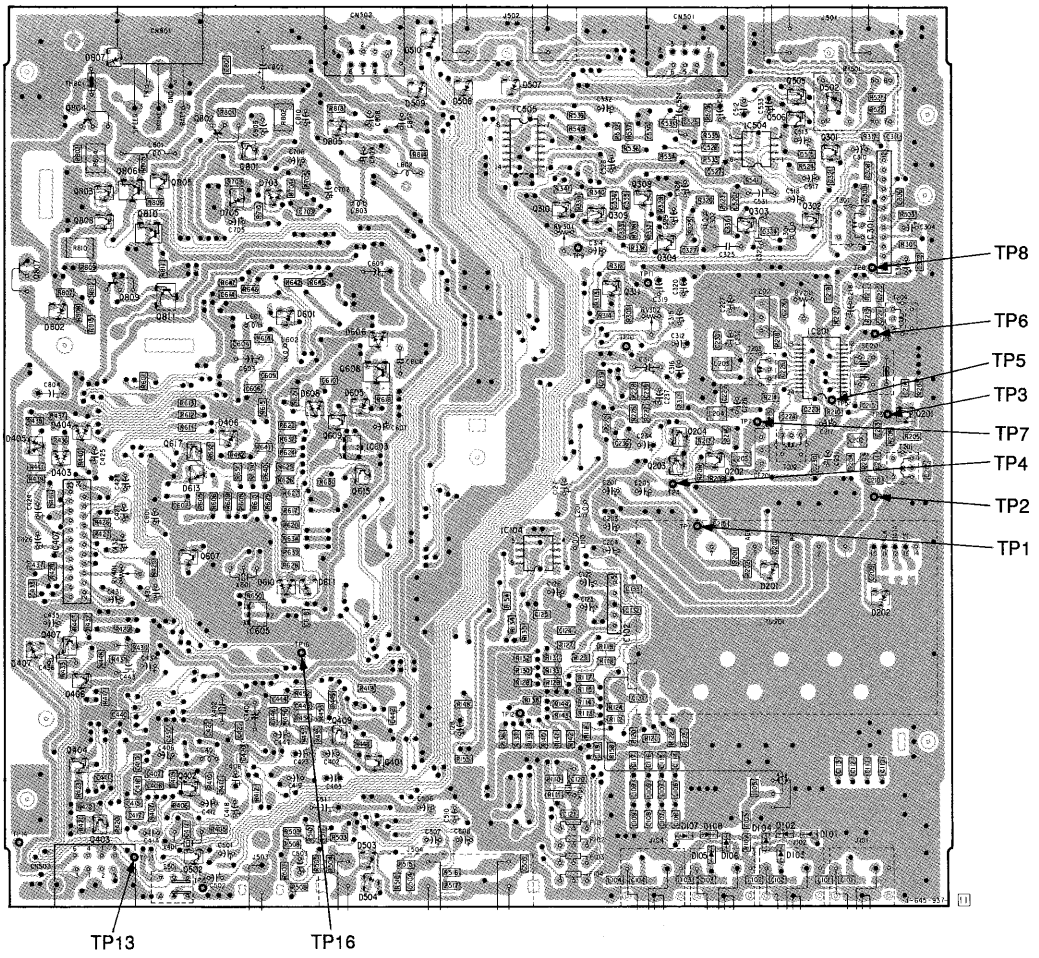


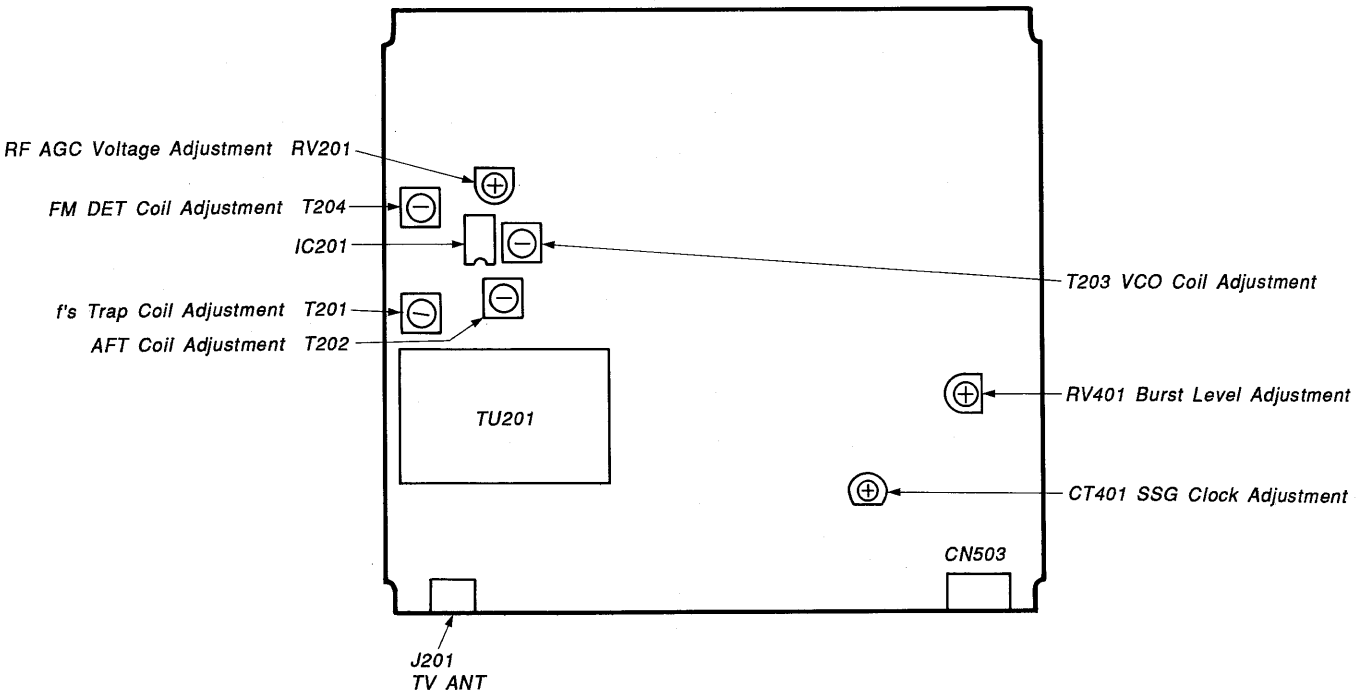
Fig. 10

Adjustment Location

MAIN BOARD (CONDUCTOR SIDE)



MAIN BOARD (COMPONENT SIDE)



SECTION 3
DIAGRAMS

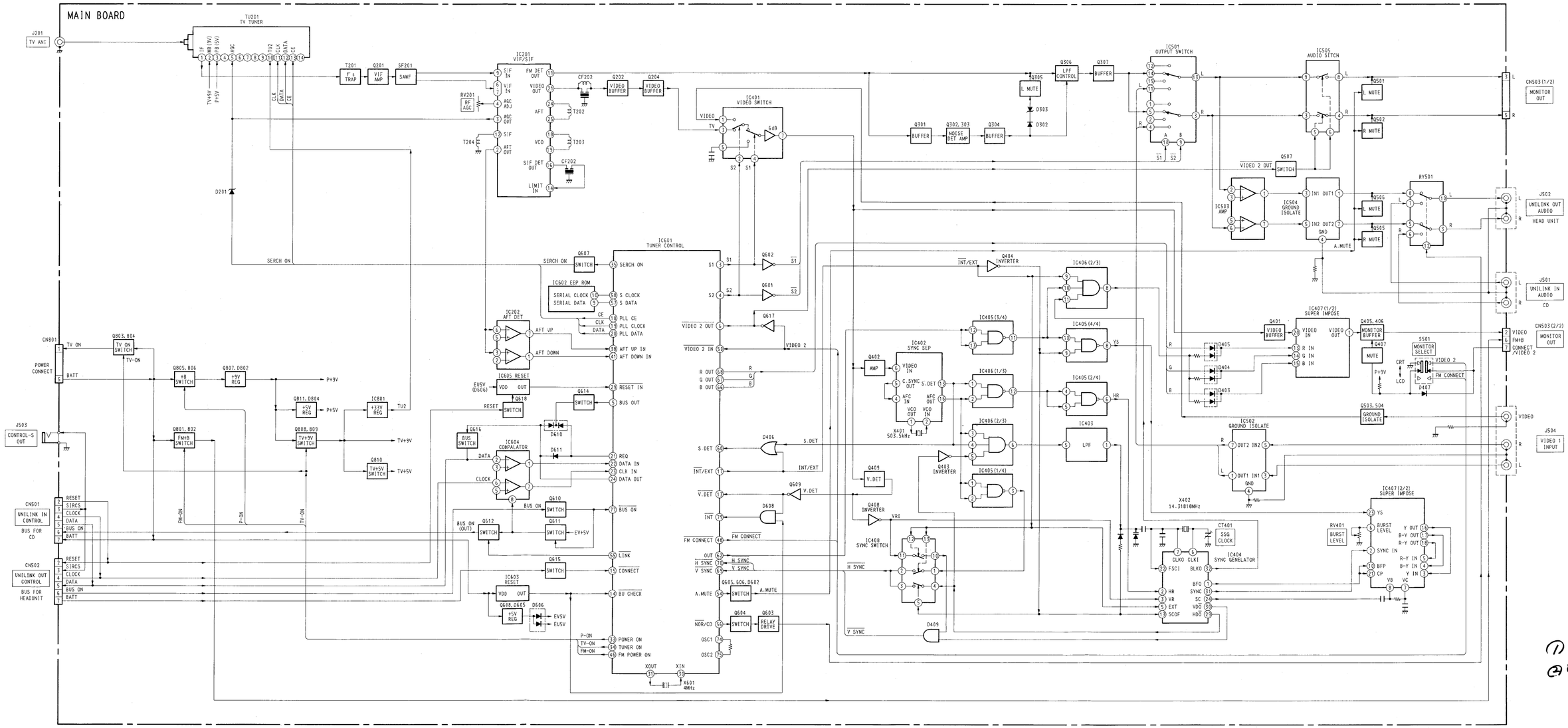
IC601 (M37201M6-514FP) PIN FUNCTION DESCRIPTION

Pin No.	Terminal	I/O	Description
1	NC	–	Not used. (Open)
2	NC	–	Not used. (Open)
3	S1	O	AUDIO, VIDEO switchovers. TV / VIDEO 1 / OTHER S1: 0 / 1 / 0 / 1 S2: 0 / 0 / 1 / 1
4	S2	O	
5	$\overline{\text{BUS OUT}}$	O	Outputs LOW when outputting DATA to BUS.
6	$\overline{\text{VIDEO 2 OUT}}$	O	Outputs LOW when VIDEO 2 is selected by XR.
7	TEST 0	I	Not used.
8	TEST 1	I	Not used.
9	TEST 2	I	Not used.
10	TEST 3	I	Not used.
11	NC	–	Not used. (Open)
12	NC	–	Not used. (Open)
13	V DET	I	V sync signal input.
14	B/U CHECK	I	Discrimination of power supply voltage, L = B/U is LOW. H = Active.
15	$\overline{\text{CONNECT}}$	I	Discrimination of BUS connector connection, L = Connect. H = Opened.
16	DIV ON	O	Not used. (Open)
17	$\overline{\text{INT}}$/EXT	O	Sync selection, L = internal sync, H = external sync.
18	PLL CE	O	to TUNER FRONTEND.
19	PLL CLOCK	O	to TUNER FRONTEND.
20	PLL DATA	O	to TUNER FRONTEND.
21	BUS REQUEST	O	Unilink.
22	BUS DATA IN	I	Unilink.
23	BUS CLK IN	I	Unilink.
24	BUS DATA OUT	O	Unilink.
25	NC	–	Not used. (Open)
26	NC	–	Not used. (Open)
27	Vss	–	GND

Pin No.	Terminal	I/O	Description
28	NC	–	Not used. (Open)
29	$\overline{\text{RESET}}$	I	Reset input.
30	X in	I	Oscillator 4 MHz.
31	X out	O	Oscillator 4 MHz.
32	Vss	–	GND
33	POWER ON	O	Turns on the power supply circuit, H = ON.
34	TUNER ON	O	Turns on the power supply of IF section of TUNER, H = ON.
35	SEARCH ON	O	Cuts AGC during SEEK, when SEEK: High.
36	R/M CONNECT	I	L = SIMUL does not exist. H = SIMUL exists.
37	$\overline{\text{MONO}}$	O	LOW at forcible MONO.
38	AFT UP IN	I	SEEK STOP detection +500 kHz.
39	NC	–	Not used. (Open)
40	NC	–	Not used. (Open)
41	AFT DOWN IN	I	SEEK STOP detection -500 kHz.
42	$\overline{\text{MAIN}}$/SUB	O	Not used. (Open)
43	JPN/USA	I	Destination, L = USA, H = JAPAN.
44	$\overline{\text{BILINGUAL}}$	I	Bilingual detection input, L = Bilingual, H = Stereo or Monaural.
45	$\overline{\text{STEREO}}$/MONO	I	STEREO detection circuit, L = Stereo, H = Monaural.
46	$\overline{\text{FRONT}}$ P-ON	O	FRONT monitor POWER ON, H = ON.
47	$\overline{\text{PKB IN}}$	I	Safety detection input, L = SAFETY release.
48	$\overline{\text{F/M CONNECT}}$	I	FRONT monitor connection detection input, L = Connection.
49	F/M MUTE	O	Not used. (Open)
50	$\overline{\text{VIDEO 2 IN}}$	I	VIDEO 2 selection detection input, L = VIDEO 2 ON.
51	NC	–	Not used. (Open)
52	NC	–	Not used. (Open)
53	NC	–	Not used. (Open)
54	AUDIO MUTE	O	MUTE

Pin No.	Terminal	I/O	Description
55	$\overline{\text{LINK}}$	O	Unilink.
56	$\overline{\text{NORMAL}}$/OTHER	O	Low output during TV and VIDEO.
57	E^2PROM DATA	I/O	DATA to E^2PROM.
58	E^2PROM CLOCK	O	CLOCK to E^2PROM.
59	NC	–	Not used. (Open)
60	SIGNAL DET	I	Video sync level discrimination, L = Poor-signal, H = Normal.
61	VIDEO MUTE	O	Not used. (Open)
62	OUT	O	Superimpose sync pulse output.
63	NC	–	Not used. (Open)
64	NC	–	Not used. (Open)
65	NC	–	Not used. (Open)
66	B-OUT	O	R.G.B blue signal output.
67	G-OUT	O	R.G.B green signal output.
68	R-OUT	O	R.G.B red signal output.
69	$\overline{\text{V-SYNC-IN}}$	I	V sync input for R.G.B.
70	$\overline{\text{H-SYNC-IN}}$	I	H sync input for R.G.B.
71	NC	–	Not used. (Open)
72	Vcc	–	–
73	Vss	–	–
74	OSC 1	–	R.G.B clock.
75	OSC 2	–	R.G.B clock.
76	NC	–	Not used. (Open)
77	BUS ON	I	BUS ON detection input, L = Active.
78	NC	–	Not used. (Open)
79	INT	I	Interrupting detection input (during V sync and B/U-check)
80	NC	–	Not used. (Open)

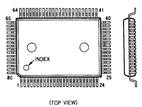
3-1. BLOCK DIAGRAM



● Semiconductor Lead Layouts

BA7230LS

M37201M6-514FP



2SB1127

2SC3851

1T33

DSA3A4

Note:

- ◇—— : parts extracted from the component side.
- —— : parts extracted from the conductor side.
- ● : Through hole.
- ▒▒: Pattern from the side which enables seeing.

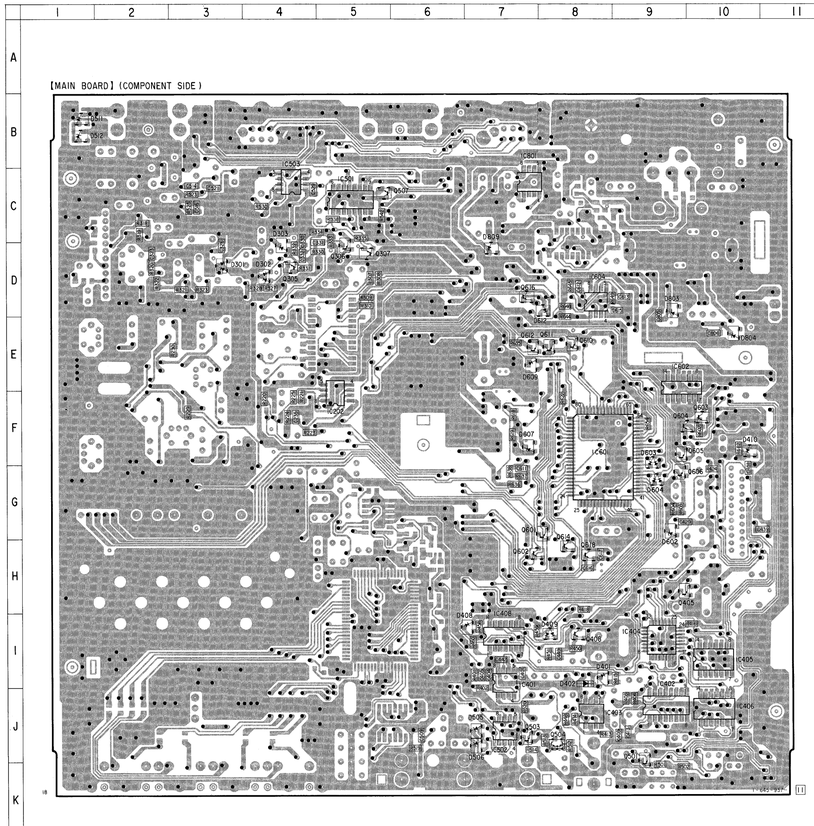
(The other layers' patterns are not indicated.)

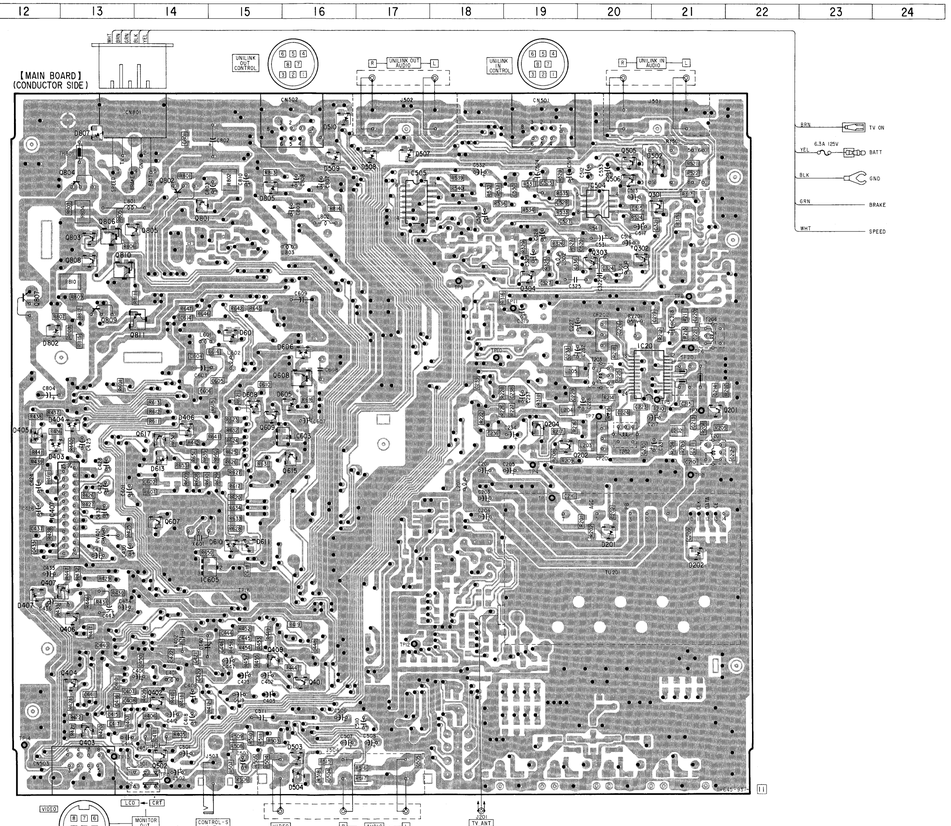
Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

● Semiconductor Location

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D201	G-20	D803	D-9	Q404	I-13
D202	H-21	D804	E-10	Q405	H-9
D301	D-3	D805	C-15	Q406	I-13
D302	D-4	D807	B-13	Q407	H-13
D303	D-4	D809	D-7	Q408	I-8
D401	I-8			Q409	I-15
D402	I-8	IC201	E-20	Q501	J-9
D403	F-12	IC202	F-5	Q502	J-14
D404	F-13	IC401	I-7	Q503	J-7
D405	F-12	IC402	J-9	Q504	J-8
D406	F-14	IC403	J-8	Q505	B-20
D407	H-12	IC404	I-9	Q506	C-20
D408	I-7	IC405	I-10	Q507	C-5
D409	I-8	IC406	J-10	Q601	G-8
D410	F-10	IC407	G-13	Q602	H-7
D502	B-21	IC408	I-7	Q603	F-10
D503	J-16	IC501	C-5	Q604	F-10
D504	K-16	IC502	J-7	Q605	F-9
D505	J-7	IC503	C-4	Q606	G-9
D506	J-7	IC504	C-20	Q607	G-14
D507	B-17	IC505	C-17	Q608	E-16
D508	B-17	IC601	F-8	Q609	F-15
D509	B-16	IC602	E-9	Q610	E-8
D510	B-16	IC603	F-16	Q611	E-8
D511	B-1	IC604	D-8	Q612	E-7
D512	B-1	IC605	H-15	Q614	H-8
D601	E-15	IC801	C-7	Q615	F-16
D602	G-9			Q616	D-7
D603	F-9	Q201	F-21	Q617	F-14
D604	G-9	Q202	F-19	Q618	H-8
D605	F-16	Q204	F-19	Q801	C-14
D606	E-16	Q301	C-21	Q802	C-14
D607	F-7	Q302	D-20	Q803	C-13
D608	F-15	Q303	D-20	Q804	C-13
D609	E-7	Q304	D-19	Q805	C-14
D610	H-15	Q305	D-4	Q806	C-13
D611	H-15	Q306	D-5	Q807	D-12
D612	D-8	Q307	D-5	Q808	D-13
D613	F-14	Q401	I-16	Q809	D-13
D801	B-13	Q402	J-14	Q810	D-13
D802	E-12	Q403	J-13	Q811	E-14

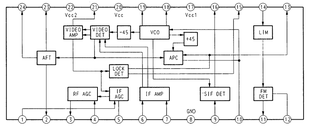
3-2. PRINTED WIRING BOARD



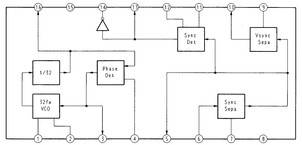


● IC Block Diagrams

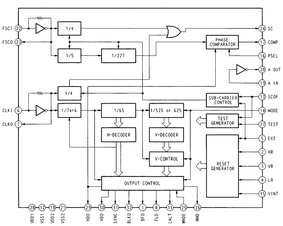
IC201 M52311FP



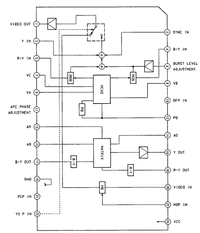
IC402 NJM2229M



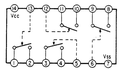
IC404 CXD1159Q



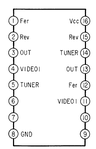
IC407 BA7230LS



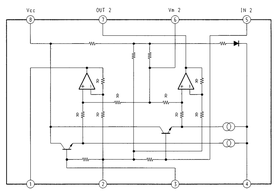
IC408 MC14066BF



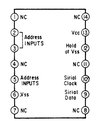
IC501 BU4052BF



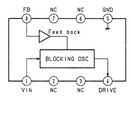
IC502 BA3121F



IC602 X24C04SI



IC801 BA6161F



Note:

- All capacitors are in μF unless otherwise noted. pF: μμF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- % : indicates tolerance.

⊖ ▭▭▭ : B+ Line

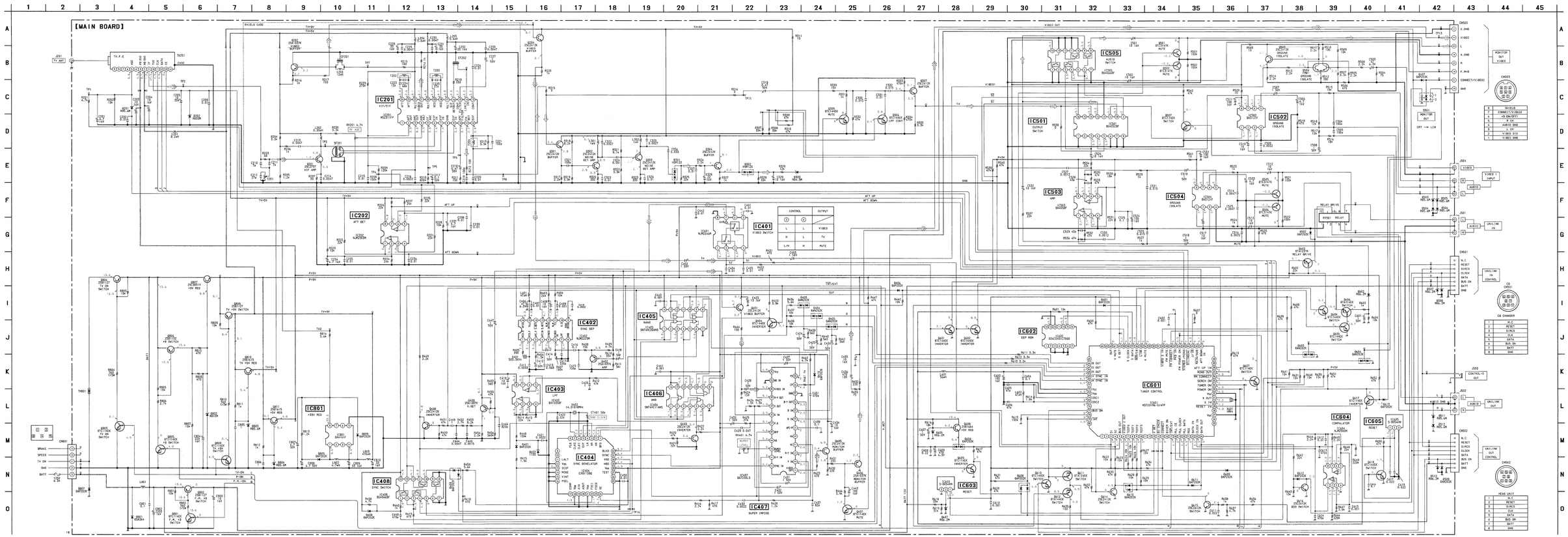
⊖ Power voltage is dc 14.4V and fed with regulated dc power supply from external power voltage jack.

⊖ Voltage is dc with respect to ground under no-signal (detuned) conditions.
no mark : TV

⊖ Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.

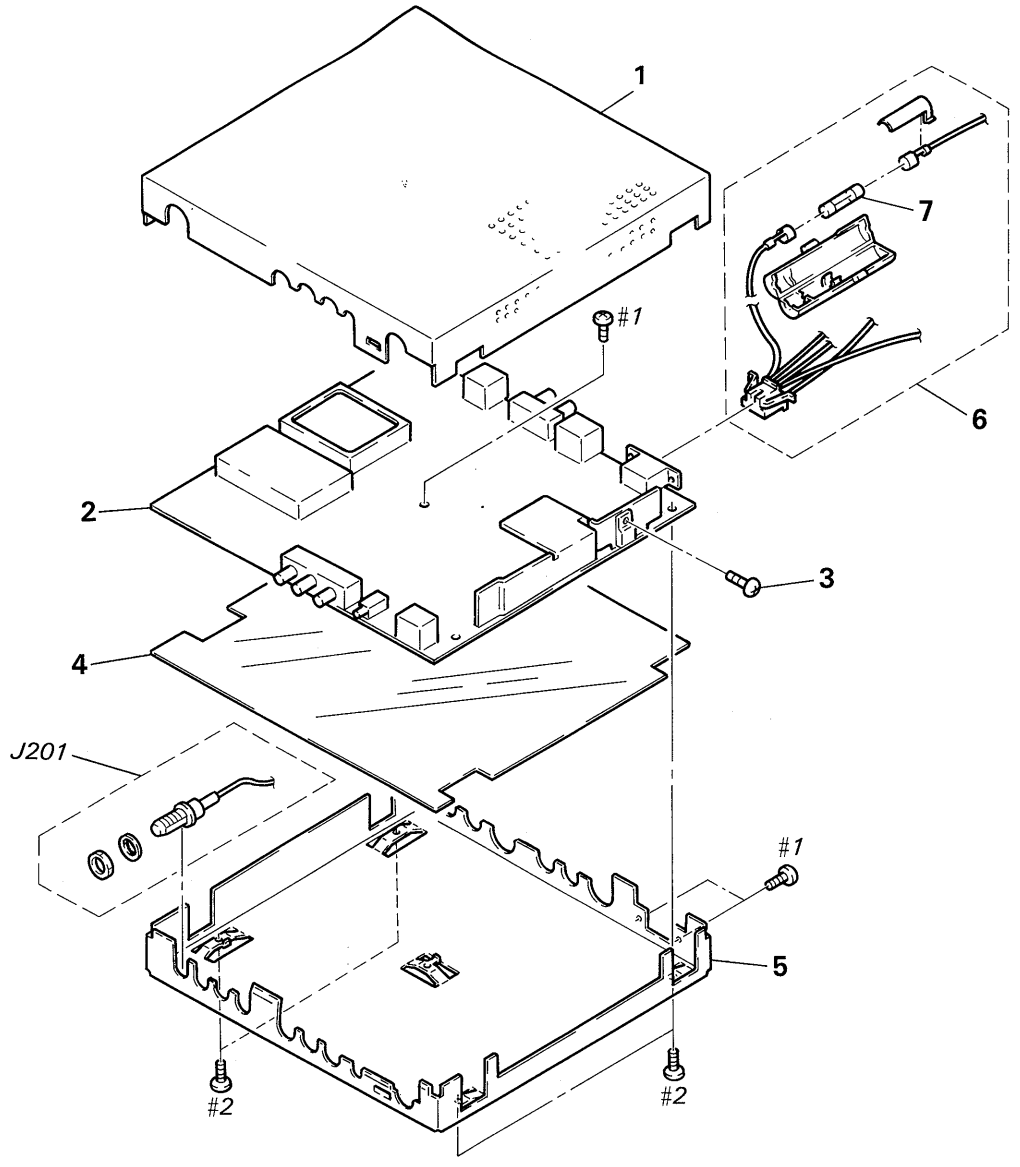
⊖ Signal path.
⇨ : TV (PICTURE)
⇨ : TV (SOUND)

3-3. SCHEMATIC DIAGRAM



SECTION 4
EXPLODED VIEW

NOTE:
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE)... (RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardwear (#mark) list is given in the last of this parts list.



Ref. No.	Part No.	Description	Remark
* 1	3-384-252-01	CHASSIS (UP-US)	
* 2	A-3295-498-A	MOUNTED PCB (B), MAIN	
3	4-931-757-31	SCREW (DIA. 2.6X8) (IT3B)	
* 4	3-384-253-01	SHEET, INSULATING	
* 5	3-384-251-01	CHASSIS (BOTTOM)	
6	1-696-786-21	CORD (WITH CONNECTOR) (POEWR)	
7	1-532-422-11	FUSE (6.3A/125V)	
J201	1-696-785-11	CORD, (F) MINI PIN	

SECTION 5
ELECTRICAL PARTS LIST

MAIN

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	A-3222-576-A	MAIN BOARD, COMPLETE			
		**********			
*	3-384-247-01	HEAT SINK (SUB)			
		< CAPACITOR >			
C201	1-126-163-11	ELECT	4.7uF	20%	50V
C202	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C203	1-126-157-11	ELECT	10uF	20%	16V
C204	1-126-157-11	ELECT	10uF	20%	16V
C205	1-126-096-11	ELECT	10uF	20%	35V
C209	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C210	1-163-224-11	CERAMIC CHIP	7PF	0.25PF	50V
C211	1-163-224-11	CERAMIC CHIP	7PF	0.25PF	50V
C212	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C213	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C214	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C215	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C216	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C217	1-124-463-00	ELECT	0.1uF	20%	50V
C218	1-124-465-00	ELECT	0.47uF	20%	50V
C219	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C220	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C221	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C223	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C224	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C225	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C226	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C227	1-126-160-11	ELECT	1uF	20%	50V
C228	1-124-242-00	ELECT	33uF	20%	25V
C229	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C230	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C231	1-124-242-00	ELECT	33uF	20%	25V
C232	1-124-242-00	ELECT	33uF	20%	25V

Ref. No.	Part No.	Description			Remark
C233	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C234	1-126-163-11	ELECT	4.7uF	20%	50V
C235	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C236	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C237	1-126-163-11	ELECT	4.7uF	20%	50V
C238	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C239	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C319	1-124-465-00	ELECT	0.47uF	20%	50V
C321	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C322	1-130-476-00	MYLAR	0.0027uF	5%	50V
C323	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C324	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C325	1-130-476-00	MYLAR	0.0027uF	5%	50V
C326	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C327	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C328	1-124-234-00	ELECT	22uF	20%	16V
C329	1-126-157-11	ELECT	10uF	20%	16V
C330	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C331	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C332	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C336	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C401	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C402	1-126-160-11	ELECT	1uF	20%	50V
C403	1-126-160-11	ELECT	1uF	20%	50V
C404	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C405	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C406	1-126-154-11	ELECT	47uF	20%	6.3V
C407	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C408	1-126-157-11	ELECT	10uF	20%	16V
C409	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C410	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C411	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C412	1-126-160-11	ELECT	1uF	20%	50V

Ref. No.	Part No.	Description			Remark
C413	1-164-344-11	CERAMIC CHIP	0.068uF	10%	25V
C414	1-124-499-11	ELECT, NONPOLAR	1uF	20%	50V
C415	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C416	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C417	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C418	1-126-160-11	ELECT	1uF	20%	50V
C419	1-126-157-11	ELECT	10uF	20%	16V
C420	1-164-346-11	CERAMIC CHIP	1uF		16V
C421	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C422	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C423	1-126-157-11	ELECT	10uF	20%	16V
C424	1-126-160-11	ELECT	1uF	20%	50V
C425	1-126-160-11	ELECT	1uF	20%	50V
C426	1-126-160-11	ELECT	1uF	20%	50V
C427	1-126-160-11	ELECT	1uF	20%	50V
C428	1-126-160-11	ELECT	1uF	20%	50V
C429	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C430	1-126-160-11	ELECT	1uF	20%	50V
C431	1-126-160-11	ELECT	1uF	20%	50V
C432	1-126-160-11	ELECT	1uF	20%	50V
C433	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C434	1-126-157-11	ELECT	10uF	20%	16V
C435	1-126-157-11	ELECT	10uF	20%	16V
C436	1-124-472-11	ELECT	470uF	20%	10V
C437	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C439	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C440	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C441	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C442	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C443	1-126-101-11	ELECT	100uF	20%	16V
C444	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C445	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C446	1-163-139-00	CERAMIC CHIP	820PF	5%	50V
C447	1-126-160-11	ELECT	1uF	20%	50V
C448	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C449	1-164-346-11	CERAMIC CHIP	1uF		16V
C450	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C451	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C501	1-126-157-11	ELECT	10uF	20%	16V
C502	1-126-157-11	ELECT	10uF	20%	16V
C503	1-126-154-11	ELECT	47uF	20%	6.3V
C504	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C505	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C506	1-126-163-11	ELECT	4.7uF	20%	50V
C507	1-126-160-11	ELECT	1uF	20%	50V
C508	1-126-160-11	ELECT	1uF	20%	50V
C509	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C510	1-126-157-11	ELECT	10uF	20%	16V
C511	1-126-101-11	ELECT	100uF	20%	16V

Ref. No.	Part No.	Description			Remark
C512	1-126-157-11	ELECT	10uF	20%	16V
C513	1-126-157-11	ELECT	10uF	20%	16V
C514	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C515	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C516	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C517	1-126-157-11	ELECT	10uF	20%	16V
C518	1-126-160-11	ELECT	1uF	20%	50V
C519	1-126-160-11	ELECT	1uF	20%	50V
C520	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C521	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C524	1-126-101-11	ELECT	100uF	20%	16V
C525	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C526	1-126-157-11	ELECT	10uF	20%	16V
C527	1-163-143-00	CERAMIC CHIP	0.0012uF	5%	50V
C528	1-163-108-00	CERAMIC CHIP	43PF	5%	50V
C529	1-163-108-00	CERAMIC CHIP	43PF	5%	50V
C530	1-163-143-00	CERAMIC CHIP	0.0012uF	5%	50V
C531	1-126-101-11	ELECT	100uF	20%	16V
C532	1-126-157-11	ELECT	10uF	20%	16V
C533	1-126-163-11	ELECT	4.7uF	20%	50V
C601	1-126-160-11	ELECT	1uF	20%	50V
C602	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C603	1-126-101-11	ELECT	100uF	20%	16V
C604	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C605	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C606	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C607	1-126-160-11	ELECT	1uF	20%	50V
C608	1-125-486-11	DOUBLE LAYERS	0.22F		5.5V
C609	1-124-472-11	ELECT	470uF	20%	10V
C610	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C611	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C612	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C613	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C614	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C615	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C616	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C617	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C618	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C801	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C802	1-124-343-00	ELECT	2200uF	20%	16V
C803	1-126-157-11	ELECT	10uF	20%	16V
C804	1-124-120-11	ELECT	220uF	20%	25V
C805	1-164-346-11	CERAMIC CHIP	1uF		16V
C806	1-164-346-11	CERAMIC CHIP	1uF		16V
C807	1-126-163-11	ELECT	4.7uF	20%	50V
C808	1-126-163-11	ELECT	4.7uF	20%	50V
C809	1-124-242-00	ELECT	33uF	20%	25V
C810	1-124-242-00	ELECT	33uF	20%	25V

MAIN

Ref. No.	Part No.	Description	Remark
		< FILTER >	
CF201	1-404-901-11	TRAP, CERAMIC	
CF202	1-577-559-21	FILTER, CERAMIC	
		< CONNECTOR >	
CN501	1-580-907-11	PLUG, CONNECTOR (UNILIK IN CONTROL)	
CN502	1-580-907-11	PLUG, CONNECTOR (UNILIK OUT CONTROL)	
CN503	1-569-766-11	JACK (MONITOR OUT)	
CN801	1-569-216-11	CONNECTOR	
		< TRIMMER >	
CT401	1-141-444-11	TRIMMER, CERAMIC	
		< DIODE >	
D201	8-719-105-90	DIODE RD5.6M-B1	
D202	8-719-118-12	DIODE RD33M	
D301	8-719-971-05	DIODE HSM123	
D302	8-719-971-05	DIODE HSM123	
D303	8-719-105-64	DIODE RD4.3M-B2	
D401	8-719-104-34	DIODE 1S2836	
D402	8-713-300-57	DIODE 1T33	
D403	8-719-400-18	DIODE MA152WK	
D404	8-719-400-18	DIODE MA152WK	
D405	8-719-400-18	DIODE MA152WK	
D406	8-719-104-34	DIODE 1S2836	
D407	8-719-104-34	DIODE 1S2836	
D408	8-719-104-34	DIODE 1S2836	
D409	8-719-104-34	DIODE 1S2836	
D410	8-719-104-34	DIODE 1S2836	
D502	8-719-104-34	DIODE 1S2836	
D503	8-719-105-90	DIODE RD5.6M-B1	
D504	8-719-105-90	DIODE RD5.6M-B1	
D505	8-719-105-90	DIODE RD5.6M-B1	
D506	8-719-105-90	DIODE RD5.6M-B1	
D507	8-719-106-08	DIODE RD6.2M-B2	
D508	8-719-106-08	DIODE RD6.2M-B2	
D509	8-719-400-18	DIODE MA152WK	
D510	8-719-106-08	DIODE RD6.2M-B2	
D511	8-719-105-90	DIODE RD5.6M-B1	
D512	8-719-105-90	DIODE RD5.6M-B1	
D601	8-719-104-34	DIODE 1S2836	
D602	8-719-106-08	DIODE RD6.2M-B2	
D603	8-719-400-18	DIODE MA152WK	
D604	8-719-400-18	DIODE MA152WK	
D605	8-719-106-08	DIODE RD6.2M-B2	
D606	8-719-104-34	DIODE 1S2836	
D607	8-719-106-08	DIODE RD6.2M-B2	
D608	8-719-104-34	DIODE 1S2836	
D609	8-719-104-34	DIODE 1S2836	
D610	8-719-400-18	DIODE MA152WK	
D611	8-719-104-34	DIODE 1S2836	
D612	8-719-104-34	DIODE 1S2836	
D613	8-719-104-34	DIODE 1S2836	
D801	8-719-945-59	DIODE DSA3A4	
D802	8-719-106-52	DIODE RD10M-B1	
D803	8-719-105-90	DIODE RD5.6M-B1	
D804	8-719-105-90	DIODE RD5.6M-B1	
D805	8-719-104-34	DIODE 1S2836	
D807	8-719-104-34	DIODE 1S2836	
D809	8-719-104-34	DIODE 1S2836	
		< IC >	
IC201	8-759-097-90	IC M52311FP-T1	
IC202	8-759-981-65	IC LM2903M	
IC401	8-759-710-62	IC NJM2246M	
IC402	8-759-710-61	IC NJM2229M	
IC403	8-759-970-89	IC BA10358F	
IC404	8-752-326-08	IC CXD1159Q	
IC405	8-759-927-46	IC SN74HC00ANS	
IC406	8-759-925-79	IC SN74HC11ANS	
IC407	8-759-914-57	IC BA7230LS	
IC408	8-759-008-67	IC MC14066BF	
IC501	8-759-932-64	IC BU4052BF	
IC502	8-759-048-67	IC BA3121F	
IC503	8-759-909-71	IC BA4558F	
IC504	8-759-048-67	IC BA3121F	
IC505	8-759-008-67	IC MC14066BF	
IC601	8-759-178-51	IC M37201M6-514FP	
IC602	8-759-513-42	IC X24C04SI	
IC603	8-759-940-45	IC S-8054HN-CB-S	
IC604	8-759-981-65	IC LM2903M	
IC605	8-759-940-45	IC S-8054HN-CB-S	
IC801	8-759-945-44	IC BA6161F	
		< JACK >	
J201	1-696-785-11	CORD, (F) MINI PIN (TV ANT)	
J501	1-580-441-11	JACK, PIN 2P (UNILINK IN AUDIO)	
J502	1-580-441-11	JACK, PIN 2P (UNILINK OUT AUDIO)	
J503	1-563-330-11	JACK (CONTROL-S)	
J504	1-580-442-21	JACK, PIN 3P (VIDEO 1 INPUT)	
		< COIL >	
L201	1-408-969-21	INDUCTOR 8.2uH	
L202	1-412-934-21	INDUCTOR 0.39uH	
L203	1-412-952-11	INDUCTOR 12uH	
L204	1-412-948-11	INDUCTOR 5.6uH	

Ref. No.	Part No.	Description		Remark
L205	1-412-948-11	INDUCTOR	5.6uH	
L301	1-414-161-31	INDUCTOR	1mH	
L302	1-414-161-31	INDUCTOR	1mH	
L401	1-408-978-21	INDUCTOR	47uH	
L601	1-408-979-21	INDUCTOR	56uH	
L602	1-408-978-21	INDUCTOR	47uH	
L801	1-421-369-00	COIL, CHOKE		
L802	1-408-920-00	INDUCTOR	4.7mH	
L803	1-408-989-21	INDUCTOR	470uH	
		< TRANSISTOR >		
Q201	8-729-175-72	TRANSISTOR	2SC2757-T33	
Q202	8-729-216-22	TRANSISTOR	2SA1162G	
Q204	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q301	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q302	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q303	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q304	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q305	8-729-901-01	TRANSISTOR	DTC144EK	
Q306	8-729-901-01	TRANSISTOR	DTC144EK	
Q307	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q401	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q402	8-729-216-22	TRANSISTOR	2SA1162G	
Q403	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q404	8-729-901-01	TRANSISTOR	DTC144EK	
Q405	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q406	8-729-216-22	TRANSISTOR	2SA1162G	
Q407	8-729-900-53	TRANSISTOR	DTC114EK	
Q408	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q409	8-729-216-22	TRANSISTOR	2SA1162G	
Q501	8-729-920-21	TRANSISTOR	DTC314TKH04	
Q502	8-729-920-21	TRANSISTOR	DTC314TKH04	
Q503	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q504	8-729-903-10	TRANSISTOR	FMW1	
Q505	8-729-920-21	TRANSISTOR	DTC314TKH04	
Q506	8-729-920-21	TRANSISTOR	DTC314TKH04	
Q507	8-729-900-53	TRANSISTOR	DTC114EK	
Q601	8-729-901-01	TRANSISTOR	DTC144EK	
Q602	8-729-901-01	TRANSISTOR	DTC144EK	
Q603	8-729-923-73	TRANSISTOR	DTA123YK	
Q604	8-729-901-01	TRANSISTOR	DTC144EK	
Q605	8-729-901-01	TRANSISTOR	DTC144EK	
Q606	8-729-901-04	TRANSISTOR	DTA114EK	
Q607	8-729-900-53	TRANSISTOR	DTC114EK	
Q608	8-729-920-85	TRANSISTOR	2SD1664-QR	
Q609	8-729-900-53	TRANSISTOR	DTC114EK	
Q610	8-729-901-01	TRANSISTOR	DTC144EK	
Q611	8-729-901-05	TRANSISTOR	DTA124EK	

Ref. No.	Part No.	Description		Remark
Q612	8-729-901-06	TRANSISTOR	DTA144EK	
Q614	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q615	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q616	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q617	8-729-900-53	TRANSISTOR	DTC114EK	
Q618	8-729-901-01	TRANSISTOR	DTC144EK	
Q801	8-729-900-53	TRANSISTOR	DTC114EK	
Q802	8-729-820-94	TRANSISTOR	2SB1127-S	
Q803	8-729-900-53	TRANSISTOR	DTC114EK	
Q804	8-729-820-94	TRANSISTOR	2SB1127-S	
Q805	8-729-900-53	TRANSISTOR	DTC114EK	
Q806	8-729-106-60	TRANSISTOR	2SB1115A-YQ	
Q807	8-729-303-61	TRANSISTOR	2SC3851-G	
Q808	8-729-900-53	TRANSISTOR	DTC114EK	
Q809	8-729-820-94	TRANSISTOR	2SB1127-S	
Q810	8-729-106-68	TRANSISTOR	2SD1615A-GP	
Q811	8-729-106-68	TRANSISTOR	2SD1615A-GP	
		< RESISTOR >		
R201	1-216-065-00	METAL CHIP	4.7K 5% 1/10W	
R202	1-216-073-00	METAL CHIP	10K 5% 1/10W	
R203	1-216-021-00	METAL CHIP	68 5% 1/10W	
R204	1-216-061-00	METAL CHIP	3.3K 5% 1/10W	
R205	1-216-051-00	METAL CHIP	1.2K 5% 1/10W	
R206	1-216-049-00	METAL CHIP	1K 5% 1/10W	
R207	1-216-015-00	METAL CHIP	39 5% 1/10W	
R208	1-216-101-00	METAL CHIP	150K 5% 1/10W	
R209	1-216-099-00	METAL CHIP	120K 5% 1/10W	
R210	1-216-119-00	METAL CHIP	820K 5% 1/10W	
R211	1-216-029-00	METAL CHIP	150 5% 1/10W	
R212	1-216-025-00	METAL CHIP	100 5% 1/10W	
R213	1-216-063-00	METAL CHIP	3.9K 5% 1/10W	
R214	1-216-049-00	METAL CHIP	1K 5% 1/10W	
R215	1-216-031-00	METAL CHIP	180 5% 1/10W	
R216	1-216-049-00	METAL CHIP	1K 5% 1/10W	
R217	1-216-025-00	METAL CHIP	100 5% 1/10W	
R218	1-216-037-00	METAL CHIP	330 5% 1/10W	
R220	1-216-049-00	METAL CHIP	1K 5% 1/10W	
R221	1-216-081-00	METAL CHIP	22K 5% 1/10W	
R222	1-216-081-00	METAL CHIP	22K 5% 1/10W	
R223	1-216-073-00	METAL CHIP	10K 5% 1/10W	
R224	1-216-082-00	METAL GLAZE	24K 5% 1/10W	
R225	1-216-081-00	METAL CHIP	22K 5% 1/10W	
R226	1-216-081-00	METAL CHIP	22K 5% 1/10W	
R227	1-216-082-00	METAL GLAZE	24K 5% 1/10W	
R228	1-216-073-00	METAL CHIP	10K 5% 1/10W	
R229	1-216-107-00	METAL CHIP	270K 5% 1/10W	
R230	1-216-061-00	METAL CHIP	3.3K 5% 1/10W	
R307	1-216-689-11	METAL CHIP	39K 0.5% 1/10W	

MAIN

Ref. No.	Part No.	Description			Remark
R308	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R309	1-216-089-00	METAL CHIP	47K	5%	1/10W
R310	1-216-089-00	METAL CHIP	47K	5%	1/10W
R311	1-216-001-00	METAL CHIP	10	5%	1/10W
R315	1-216-295-00	METAL CHIP	0	5%	1/10W
R316	1-216-295-00	METAL CHIP	0	5%	1/10W
R317	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R318	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R319	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R320	1-216-037-00	METAL CHIP	330	5%	1/10W
R321	1-216-072-00	METAL CHIP	9.1K	5%	1/10W
R322	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R323	1-216-037-00	METAL CHIP	330	5%	1/10W
R325	1-216-081-00	METAL CHIP	22K	5%	1/10W
R326	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R327	1-216-049-00	METAL CHIP	1K	5%	1/10W
R328	1-216-085-00	METAL CHIP	33K	5%	1/10W
R329	1-216-075-00	METAL CHIP	12K	5%	1/10W
R330	1-216-073-00	METAL CHIP	10K	5%	1/10W
R331	1-216-049-00	METAL CHIP	1K	5%	1/10W
R332	1-216-089-00	METAL CHIP	47K	5%	1/10W
R333	1-216-113-00	METAL CHIP	470K	5%	1/10W
R334	1-216-113-00	METAL CHIP	470K	5%	1/10W
R335	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R401	1-216-041-00	METAL CHIP	470	5%	1/10W
R402	1-216-041-00	METAL CHIP	470	5%	1/10W
R403	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R404	1-216-073-00	METAL CHIP	10K	5%	1/10W
R405	1-216-039-00	METAL CHIP	390	5%	1/10W
R406	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R407	1-216-097-00	METAL CHIP	100K	5%	1/10W
R408	1-216-029-00	METAL CHIP	150	5%	1/10W
R409	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R410	1-216-085-00	METAL CHIP	33K	5%	1/10W
R411	1-216-091-00	METAL CHIP	56K	5%	1/10W
R412	1-216-089-00	METAL CHIP	47K	5%	1/10W
R413	1-216-049-00	METAL CHIP	1K	5%	1/10W
R414	1-216-081-00	METAL CHIP	22K	5%	1/10W
R415	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R416	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R417	1-216-041-00	METAL CHIP	470	5%	1/10W
R418	1-216-041-00	METAL CHIP	470	5%	1/10W
R419	1-216-041-00	METAL CHIP	470	5%	1/10W
R420	1-216-089-00	METAL CHIP	47K	5%	1/10W
R421	1-216-081-00	METAL CHIP	22K	5%	1/10W
R422	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R423	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R424	1-216-029-00	METAL CHIP	150	5%	1/10W
R425	1-216-083-00	METAL CHIP	27K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R426	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R427	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R428	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R429	1-216-041-00	METAL CHIP	470	5%	1/10W
R430	1-216-033-00	METAL CHIP	220	5%	1/10W
R431	1-216-033-00	METAL CHIP	220	5%	1/10W
R432	1-216-033-00	METAL CHIP	220	5%	1/10W
R433	1-216-022-00	METAL CHIP	75	5%	1/10W
R436	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R437	1-216-073-00	METAL CHIP	10K	5%	1/10W
R438	1-216-073-00	METAL CHIP	10K	5%	1/10W
R439	1-216-043-00	METAL CHIP	560	5%	1/10W
R440	1-216-043-00	METAL CHIP	560	5%	1/10W
R441	1-216-043-00	METAL CHIP	560	5%	1/10W
R442	1-216-073-00	METAL CHIP	10K	5%	1/10W
R444	1-216-029-00	METAL CHIP	150	5%	1/10W
R446	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R447	1-216-089-00	METAL CHIP	47K	5%	1/10W
R448	1-216-097-00	METAL CHIP	100K	5%	1/10W
R449	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R450	1-216-089-00	METAL CHIP	47K	5%	1/10W
R451	1-216-089-00	METAL CHIP	47K	5%	1/10W
R452	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R453	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R454	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R455	1-216-089-00	METAL CHIP	47K	5%	1/10W
R456	1-216-115-00	METAL CHIP	560K	5%	1/10W
R457	1-216-043-00	METAL CHIP	560	5%	1/10W
R458	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R459	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R460	1-216-049-00	METAL CHIP	1K	5%	1/10W
R461	1-216-049-00	METAL CHIP	1K	5%	1/10W
R462	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R501	1-216-097-00	METAL CHIP	100K	5%	1/10W
R502	1-216-097-00	METAL CHIP	100K	5%	1/10W
R503	1-216-001-00	METAL CHIP	10	5%	1/10W
R504	1-216-022-00	METAL CHIP	75	5%	1/10W
R505	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R506	1-216-041-00	METAL CHIP	470	5%	1/10W
R507	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R508	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R509	1-216-073-00	METAL CHIP	10K	5%	1/10W
R510	1-216-025-00	METAL CHIP	100	5%	1/10W
R511	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R512	1-216-039-00	METAL CHIP	390	5%	1/10W
R513	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R514	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R515	1-216-079-00	METAL CHIP	18K	5%	1/10W
R516	1-216-079-00	METAL CHIP	18K	5%	1/10W
R517	1-216-075-00	METAL CHIP	12K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R518	1-216-075-00	METAL CHIP	12K	5%	1/10W
R519	1-216-041-00	METAL CHIP	470	5%	1/10W
R520	1-216-001-00	METAL CHIP	10	5%	1/10W
R521	1-216-097-00	METAL CHIP	100K	5%	1/10W
R522	1-216-097-00	METAL CHIP	100K	5%	1/10W
R523	1-216-049-00	METAL CHIP	1K	5%	1/10W
R524	1-216-049-00	METAL CHIP	1K	5%	1/10W
R525	1-216-041-00	METAL CHIP	470	5%	1/10W
R527	1-216-049-00	METAL CHIP	1K	5%	1/10W
R529	1-216-049-00	METAL CHIP	1K	5%	1/10W
R530	1-216-079-00	METAL CHIP	18K	5%	1/10W
R531	1-216-081-00	METAL CHIP	22K	5%	1/10W
R532	1-216-089-00	METAL CHIP	47K	5%	1/10W
R533	1-216-089-00	METAL CHIP	47K	5%	1/10W
R534	1-216-081-00	METAL CHIP	22K	5%	1/10W
R535	1-216-089-00	METAL CHIP	47K	5%	1/10W
R536	1-216-089-00	METAL CHIP	47K	5%	1/10W
R537	1-216-081-00	METAL CHIP	22K	5%	1/10W
R538	1-216-295-00	METAL CHIP	0	5%	1/10W
R539	1-216-089-00	METAL CHIP	47K	5%	1/10W
R540	1-216-089-00	METAL CHIP	47K	5%	1/10W
R541	1-216-001-00	METAL CHIP	10	5%	1/10W
R542	1-216-089-00	METAL CHIP	47K	5%	1/10W
R601	1-216-073-00	METAL CHIP	10K	5%	1/10W
R602	1-216-081-00	METAL CHIP	22K	5%	1/10W
R603	1-216-049-00	METAL CHIP	1K	5%	1/10W
R604	1-216-073-00	METAL CHIP	10K	5%	1/10W
R607	1-216-295-00	METAL CHIP	0	5%	1/10W
R608	1-216-089-00	METAL CHIP	47K	5%	1/10W
R609	1-216-089-00	METAL CHIP	47K	5%	1/10W
R610	1-216-089-00	METAL CHIP	47K	5%	1/10W
R611	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R612	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R613	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R614	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R615	1-216-097-00	METAL CHIP	100K	5%	1/10W
R616	1-216-079-00	METAL CHIP	18K	5%	1/10W
R617	1-216-089-00	METAL CHIP	47K	5%	1/10W
R618	1-216-085-00	METAL CHIP	33K	5%	1/10W
R619	1-216-090-00	METAL CHIP	51K	5%	1/10W
R620	1-216-089-00	METAL CHIP	47K	5%	1/10W
R621	1-216-089-00	METAL CHIP	47K	5%	1/10W
R622	1-216-073-00	METAL CHIP	10K	5%	1/10W
R623	1-216-073-00	METAL CHIP	10K	5%	1/10W
R624	1-216-073-00	METAL CHIP	10K	5%	1/10W
R625	1-216-073-00	METAL CHIP	10K	5%	1/10W
R626	1-216-073-00	METAL CHIP	10K	5%	1/10W
R627	1-216-073-00	METAL CHIP	10K	5%	1/10W
R628	1-216-073-00	METAL CHIP	10K	5%	1/10W
R629	1-216-073-00	METAL CHIP	10K	5%	1/10W
R631	1-216-073-00	METAL CHIP	10K	5%	1/10W
R632	1-216-089-00	METAL CHIP	47K	5%	1/10W
R633	1-216-089-00	METAL CHIP	47K	5%	1/10W
R634	1-216-089-00	METAL CHIP	47K	5%	1/10W
R635	1-216-025-00	METAL CHIP	100	5%	1/10W
R636	1-216-089-00	METAL CHIP	47K	5%	1/10W
R637	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R638	1-216-049-00	METAL CHIP	1K	5%	1/10W
R639	1-216-073-00	METAL CHIP	10K	5%	1/10W
R640	1-216-073-00	METAL CHIP	10K	5%	1/10W
R641	1-216-073-00	METAL CHIP	10K	5%	1/10W
R642	1-216-081-00	METAL CHIP	22K	5%	1/10W
R643	1-216-073-00	METAL CHIP	10K	5%	1/10W
R644	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R645	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R646	1-216-105-00	METAL CHIP	220K	5%	1/10W
R647	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R648	1-216-081-00	METAL CHIP	22K	5%	1/10W
R649	1-216-105-00	METAL CHIP	220K	5%	1/10W
R650	1-216-089-00	METAL CHIP	47K	5%	1/10W
R651	1-216-089-00	METAL CHIP	47K	5%	1/10W
R652	1-216-089-00	METAL CHIP	47K	5%	1/10W
R653	1-216-089-00	METAL CHIP	47K	5%	1/10W
R801	1-216-073-00	METAL CHIP	10K	5%	1/10W
R802	1-220-271-11	METAL GLAZE	560	5%	1/2W
R803	1-216-073-00	METAL CHIP	10K	5%	1/10W
R804	1-220-271-11	METAL GLAZE	560	5%	1/2W
R805	1-216-073-00	METAL CHIP	10K	5%	1/10W
R806	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R807	1-216-073-00	METAL CHIP	10K	5%	1/10W
R808	1-216-041-00	METAL CHIP	470	5%	1/10W
R809	1-216-073-00	METAL CHIP	10K	5%	1/10W
R810	1-220-271-11	METAL GLAZE	560	5%	1/2W
R811	1-216-049-00	METAL CHIP	1K	5%	1/10W
R812	1-216-049-00	METAL CHIP	1K	5%	1/10W
R813	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R814	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R815	1-216-041-00	METAL CHIP	470	5%	1/10W
		< VARIABLE RESISTOR >			
RV201	1-237-604-11	RES, ADJ, METAL GRAZE 4.7K			
RV401	1-237-604-11	RES, ADJ, METAL GRAZE 4.7K			
		< RELAY >			
RY501	1-515-654-11	RELAY			
		< SWITCH >			
S501	1-570-114-11	SWITCH, SLIDE (MONITOR OUT REAR/FRONT)			

MAIN

Ref. No.	Part No.	Description	Remark
		< FILTER >	
SF201	1-579-529-11	FILTER, SAW	
		< TRANSFORMER >	
T201	1-404-990-11	COIL	
T202	1-404-991-11	COIL	
T203	1-404-989-11	COIL	
T204	1-404-800-11	COIL	
		< THERMISTOR >	
TH801	1-809-148-11	THERMISTOR PTH8L07AR2ROM1B510	
		< TUNER >	
TU201	1-693-204-11	FRONT END	
		< VIBRATOR >	
X401	1-579-583-11	VIBRATOR, CERAMIC (503.5KHz)	
X402	1-567-866-11	OSCILLATOR, CRYSTAL (14.31818MHz)	
X601	1-567-819-11	VIBRATOR, CERAMIC (4MHz)	
**********			
		MISCELLANEOUS	
		**********	
6	1-696-786-21	CORD (WITH CONNECTOR) (POWER)	
7	1-532-422-11	FUSE (6.3A/125V)	
J201	1-696-785-11	CORD, (F) MINI PIN	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-558-626-11	CORD, CONNECTION (PINCORD, RCA)	
	1-590-519-11	CORD (WITH CONNECTOR) (CABLE, UNILINK)	
	1-696-786-21	CORD (WITH CONNECTOR) (POWER)	
	3-384-690-01	TAPE, MAGIC	
*	3-904-507-01	INDIVIDUAL CARTON	
*	3-388-063-01	CUSHION, CORRUGATED FIBERBOARD	
	3-755-919-21	MANUAL, INSTRUCTION (ENGLISH, FRENCH)	
**********			
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-792-09	SCREW +PTT 2.6X6 (S)	
#2	7-685-863-09	SCREW +BVTT 2.6X8 (S)	

9-957-690-11

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